

# **Cooperative Groundwater Management Plan for the Indian Wells Valley**

## **Preamble:**

The groundwater aquifer system in the Indian Wells Valley (as shown in Figure #1) is complex and the supply is finite. Substantial data is available regarding groundwater production in the Valley but only limited data exist pertaining to the aquifer characteristics. While considerable data has been collected through individual and cooperative technical studies, there is still a need for additional information to further characterize the watershed and to support the management of the aquifer system in the Valley.

Large scale cooperative groundwater technical studies have been completed and are continuing in the Indian Wells Valley. The results of this effort contributed valuable insights to the nature of the Valley's groundwater resources. Based on these studies, the major participants in the study (the Indian Wells Valley Water District, Naval Air Weapons Station/China Lake, Searles Valley Minerals) and other Parties have concluded that it is in their best interest to participate in the development of this Cooperative Groundwater Management Plan (the "Plan") to extend the useful life of the groundwater resources to meet current and foreseeable user needs in the Valley.

## **Purpose:**

The purpose of this Plan is to:

- 1) set forth guidelines and management principles for the production, distribution, and use of groundwater within the purview of the participants;
- 2) further develop (cooperatively or individually) the technical data and analytical capabilities to better understand the nature and characteristics of the watershed and aquifer system;
- 3) apply these guidelines toward sound conservation and management practices to extend the useful life of the groundwater resource to meet current and foreseeable future demands;
- 4) coordinate interested local agencies and water producers into a cooperative planning effort to develop objectives and share information and management practices to maintain the life of the resource.
- 5) develop and refine criteria for the selection, collection, sampling, and monitoring protocol of groundwater and groundwater production and/or monitoring wells within the Indian Wells Valley.

The Parties agree that, within the framework established by this Plan, the Parties themselves are best able to determine how to meet their respective future water supply needs and assure the availability of a long-term, high quality water supply.

The Parties recognize the varied beneficial uses within the Valley, including residential, agricultural, industrial, municipal, commercial, and public. In addition, Searles Valley Minerals currently exports water from the Valley. Groundwater planning for the Valley must take these existing uses into account.

This Plan is not intended to alter or affect any existing water rights, and no Party, by executing this Plan, waives any of its rights.

This Plan is intended to be a flexible document. As more groundwater information becomes available through technical studies, data collection and analysis, and experience in interpreting the effects of pumping pattern changes it is expected, and agreed, that this Plan will be modified accordingly.

#### **Planning Concerns:**

The following concerns have provided the incentive to the Parties for participating in a cooperative planning effort in the Indian Wells Valley.

- 1) Water levels have declined in areas within the Valley.
- 2) As depth to groundwater increases, production and distribution costs will increase.
- 3) As depth to groundwater increases, the potential exists for poorer quality water to mix with and degrade higher quality water.
- 4) Some portion of the recharge to the Valley from the Sierra Nevada may be lost to evaporation in the China Lake playa.
- 5) Our understanding of the complex geohydrology of the Valley is based on groundwater quantity and quality data collected from available production and monitoring wells located throughout much of the Valley. The recharge and discharge characteristics of the aquifer are not fully understood. Adequacy of the known groundwater reserves to meet future demands shall be determined.

#### **Planning Objectives / Groundwater Management Guidelines:**

In an effort to successfully address the aforementioned concerns, the Parties' actions will be directed toward the following groundwater management objectives:

##### **Planning Objective #1: Limit additional large scale pumping in areas that appear to be adversely impacted.**

No Party will increase its annual production of water from the groundwater depression identified in Figure #2 (applies to extractions greater than 5 AF/yr.). The water producing Signatories' long-term goal is to limit new and reduce existing production in this area to the fullest extent possible over an economically reasonable time frame.

**Planning Objective #2: Distribute new groundwater extraction within the Valley in a manner that will minimize adverse effects to existing groundwater conditions (levels and quality), and maximize the long-term supply within the Valley.**

Future groundwater development by the Parties will be distributed within the Valley in a manner that is designed in accordance with aquifer characteristics. The Parties will consider developing, to the fullest extent possible, individually or as a cooperating group, wells in the outlying areas of the Valley. Areas such as Indian Wells Valley Water District's southwest field should be considered as should wells designed to capture recharge from all areas of the watershed. As a general guideline, the location and capacity of new production wells (excluding domestic wells) should not unreasonably interfere with existing wells.

**Planning Objective #3: Aggressively pursue the development and implementation of water conservation and education programs.**

The Parties have collectively developed a written policy regarding water conservation (Water Conservation Public Policy-Attachment A) and will continue to develop and refine, to the extent possible, water conservation guidelines and education programs.

**Planning Objective #4: Encourage the use of treated water, reclaimed water, recycled, gray and lower quality water where appropriate and economically feasible.**

The Parties will consider, individually or collectively, use of non-potable water, such as treated sewage effluent or poorer quality sources, for appropriate re-use applications. The Parties will consider constructing, individually or collectively, recharge facilities including spreading basins and other types of facilities to capture and conserve storm water flows to augment efforts to replenish groundwater reserves. Water treatment and blending of different quality waters should be pursued to extend the life of the groundwater resource.

**Planning Objective #5: Explore the potential for other types of water management programs that are beneficial to the Valley.**

The Parties will consider, individually or collectively, projects such as water transfers, water banking, water importation, groundwater replenishment, and other programs that will enhance or prolong the groundwater reserves in the Valley. The Parties may consider joint acquisition, use, and operation of such projects and/or programs.

The Parties will coordinate with, and provide input to, land use planning authorities regarding water-intensive development activities within the Valley.

The Parties will review any new proposed export of water from the Valley with respect to its effect on groundwater resources, and make appropriate response,

including but not limited to participation in the environmental review and planning process.

**Planning Objective #6: Continue cooperative efforts to develop information and data which contributes to further defining and better understanding the groundwater resource in the Indian Wells Valley.**

The Parties will continue to cooperate, to the fullest extent possible, in data gathering and analysis projects focusing on groundwater recharge, discharge, storage, quality, quantity, transmissivity and storativity as it pertains to the groundwater resources of the Indian Wells Valley. In conjunction with this objective, the Parties have collectively developed a Selection Protocol for wells Used for Water Level and Water Quality Monitoring (Attachment B), a Groundwater Sampling Protocol (Attachment C), a Groundwater Sampling Plan (Attachment D), and a Water Level Monitoring Protocol (Attachment E).

**Planning Objective #7: Develop an interagency management framework to implement objectives of this Plan.**

The following entities are signatories on this Plan: Eastern Kern County, Resource Conservation District, Indian Wells Valley Airport District, Indian Wells Valley Water District, Inyokern Community Services District, Kern County Water Agency, Naval Air Weapons Station/China Lake, Searles Valley Minerals, the City of Ridgecrest, Quist Farms, the Bureau of Land Management, and Kern County.

The Parties may develop a cooperative agreement which defines the roles, responsibilities, rights, and obligations of all participants, affords opportunities to enlist new members and provides the administrative framework for implementing applicable elements of this Plan. A Steering Committee with representatives from each signing entity has been established to assist with coordinating each signing entity's groundwater management actions in conformity to the Plan. In conjunction with this objective, as well as Planning Objectives 1 through 6, the Parties have collectively developed a Working Group Objectives Action Plan (Attachment F).

Signing this Plan does not create any financial obligations. Future financial obligations will be determined in the agreement developed to implement this plan.

**Signatory Accomplishments**

Since cooperating as a groundwater resources management group, the Signatories have accomplished many water resource projects in an effort to further understand the aquifer system and to extend the useful life of the aquifer. The accomplishments are listed in Attachment G and may be revised and updated from time to time without amending the Plan or without obtaining the mutual written consent of the Parties.

**Severability:**

If any part of this Plan is declared invalid by a court of law, the remaining provisions of the Plan shall continue in full force and effect.

**Changes:**

It is understood and agreed that this Plan contains all the provisions agreed upon by the Parties thereto. This Plan may be amended at any time by mutual written consent of the Parties. Notice of proposed changes must be submitted to the other Parties at least thirty (30) days in advance of the proposed change.


**Effective Date, Termination, and Withdraw:**

This Plan is effective when signed and will remain in effect until amended or terminated by mutual written agreement. Any Party may withdraw from this Plan by giving the other Parties six months' written notice. This agreement will remain in effect for six years from the signing date and will be reviewed triennially.

Originally executed the 21<sup>st</sup> day of September, 1995, at Ridgecrest, California.

Revised and accepted this 16<sup>th</sup> day of March, 2006 at Ridgecrest, California

Revised and accepted this \_\_\_\_ day of \_\_\_\_, 2012 at Ridgecrest, California.

  
COMMANDER, NAVY REGION  
SOUTHWEST

KERN COUNTY WATER AGENCY

CITY OF RIDGECREST

INYOKERN COMMUNITY SERVICES  
DISTRICT

INDIAN WELLS VALLEY WATER  
DISTRICT

SEARLES VALLEY MINERALS

EASTERN KERN COUNTY  
RESOURCES CONSERVATION  
DISTRICT

INDIAN WELLS VALLEY AIRPORT  
DISTRICT

BUREAU OF LAND MANAGEMENT      QUIST FARMS

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NAVAL AIR WEAPONS STATION  
CHINA LAKE

By \_\_\_\_\_

CITY OF RIDGECREST

By 


INDIAN WELLS VALLEY WATER  
DISTRICT

By 

EASTERN KERN COUNTY  
RESOURCES CONSERVATION  
DISTRICT

By 

BUREAU OF LAND MANAGEMENT

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KERN COUNTY

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